

CLAIMS

1. A processing apparatus performing a process on a substrate while supplying a process gas including a source gas and an inert gas, comprising:
 - a process chamber in which the substrate is accommodated;
 - process gas supply means for supplying the process gas into the process chamber;
 - exhaust means;
 - pressure detecting means for detecting a pressure in said process chamber; and
 - control means for controlling an amount of flow of the process gas supplied to said process chamber based on a result of detection of the pressure detecting means.
2. The processing apparatus as claimed in claim 1, wherein said processing gas supply means includes source gas supply means for supplying a source gas and an inert gas supply means for supplying an inert gas, and said control means controls an amount of flow of the process gas to be supplied to said process chamber by controlling an amount of flow of the inert gas by controlling said inert gas supply means.
3. The processing apparatus as claimed in claim 2, wherein said source gas supply means supplies a plurality of kinds of source gases alternately to the process chamber, and said inert gas supply means continuously supplies the inert gas to the process chamber.
4. The processing apparatus as claimed in claim 1, wherein said control means controls the amount of flow

of the process gas so that a pressure in said process chamber is substantially constant.

5 5. The processing apparatus as claimed in claim 4, wherein said control means controls the amount of flow of the process gas so that a pressure in said process chamber falls within a range of $\pm 10\%$ of a predetermined pressure.

10 6. A processing method of applying a process to a substrate while supplying a process gas including a source gas and an inert gas, comprising:

 a first step of supplying a first source gas to a process chamber at a first predetermined amount of flow and simultaneously supplying an inert gas to the process chamber so as to maintain inside said process chamber at a predetermined process pressure;

 a second step of stopping supply of the first source gas and continuously supplying only the inert gas so as to maintain inside said process chamber at said predetermined process pressure;

 a third step of supplying a second source gas to said process chamber at a second predetermined amount of flow and simultaneously supplying the inert gas to the process chamber so as to maintain inside said process chamber at said predetermined process pressure; and

 a fourth step of stopping supply of the second source gas and continuously supplying only the inert gas so as to maintain inside said process chamber at said predetermined process pressure,

 wherein the process is applied to said substrate by repeatedly performing said first step to said fourth step.

7. The processing method as claimed in claim 6, wherein said first source gas is TiCl_4 , said second source gas is NH_3 and said inert gas is N_2 .

5 8. The processing method as claimed in claim 7, wherein said first predetermined amount of flow is 1 to 50 sccm, said second predetermined amount of flow is 10 to 1000 sccm and said predetermined process pressure is 1 to 400 Pa.

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9. The processing method as claimed in claim 8, wherein an allowable range of fluctuation of said predetermined process pressure is $\pm 10\%$.